



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/809,797

03/26/2004

Chikara Ohki

70456-025

7147

20277 7590 05/25/2007  
MCDERMOTT WILL & EMERY LLP  
600 13TH STREET, N.W.  
WASHINGTON, DC 20005-3096

EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3682

MAIL DATE

DELIVERY MODE

05/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/809,797	Applicant(s) OHKI ET AL.	
	Examiner Marcus Charles	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03-26-2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is the first action relating to serial application number 10/809,797 filed 03-26-2004.

Claims 1-24 are current pending.

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

2. The examiner has accepted the drawing filed with this application as formal drawing.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 11, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima et al. (4,867,649) in view of Ohki (US 2003/0123769). Kawashima et al. disclose the claimed invention, including a compressor component (25) incorporated into a compressor having a compressor body (28) and a pulley mechanism (not labeled). Kawashima et al. fail to disclose the pulley mechanism component having a austenite grain with a grain size number failing within a range exceeding 10, a fracture value of at least 2650 MPa and a fracture of at most 0.5ppm. Ohki discloses a compressor bearing having a austenite grain of grain size exceeding 10, a stress

Art Unit: 3682

fracture value of at least 2659=0 MPA and a hydrogen compound of at most 0.5ppm (paragraphs [0031-0039) in order to increase fatigue life, increase anti crack strength and increase life at high temperature. Therefore, it would have been obvious to one of ordinary skill in the art to modify the bearing of Kawashima et al. so that it includes the limitation of Ohki in order in order to increase fatigue life, increase anti crack strength and increase life at high temperature.

In claims 5, 12-13 and 19, note the swash plate (12) support bearing (25) supporting the swash-plate.

In claim 6, 15 and 20, note the bearing (25) is a needle roller thrust bearing.

In claims 7-8 and 14, note the pulley support bearing (95/47) which is needle bearing.

In claims 9-10), note the bearing (95/47) is a shaft support bearing.

In claims 16-17, the claimed invention in disclosed above.

In claims 18-24, Kawashima et al. (4,867,649) in view of Ohki clearly disclose the claim invention above.

### ***Conclusion***


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hashimura et al. (US 2003/0201036) disclose an austenite grain size exceeding number 10. Fukai (6,056,514) Sugiura et al. (6,280,151) and Ban et al. (6,247,899) disclose a compressor. Tajima et al. (US 2001/00152241) disclose a bearing having an austenite grain size greater than 5. Takemura et al. (6,224,688)

disclose a rolling bearing containing austenite grain size exceeding 10. Murakami et al. discloses a component a hydrogen content of no more than 0.5 ppm.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Marcus Charles  
Primary Examiner  
Art Unit 3682  
May 16, 2007